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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,583	08/22/2003	Nitin J. Shah		9950

7590 11/02/2004  
NITIN J. SHAH  
9618 DELLA DRIVE  
RICHMOND, VA 23233

EXAMINER

BOCHNA, DAVID

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/646,583

Applicant(s)

SHAH, NITIN J.

Examiner

David E. Bochna

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-10 and 14-18 is/are rejected.
- 7) ☒ Claim(s) 3, 4 and 11-13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Kane.

In regard to claim 1, Brown discloses a hollow metal fitting 10 for use in making a welded metal joint with reduced residual stresses, which fitting comprises an internal annular shoulder 13 having an inner diameter; and an annular wall which

(1) extends from the shoulder,

(2) has a cylindrical inner surface,

(3) has a cylindrical outer surface whose diameter is greater than the inner diameter of the shoulder,

(4) defines with the shoulder a cylindrical socket having a common longitudinal axis with the annular wall, and

(5) has an end surface 14 connecting the cylindrical outer and inner surfaces, which end surface is chamfered so that the inner surface extends beyond the outer surface in the axial direction and so that the end surface, as viewed in a cross section taken along the longitudinal axis of the annular wall, however, Brown discloses making the end surface chamfered in order to provide a pipe joint with adequate structural strength, but Brown does not disclose that the end

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surface is concave. Kane discloses providing a concave surface 28 in order to form a weld pocket that will receive enough weld material to improve the strength of the welded joint.

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the end surface of Brown, to include a concave surface, as taught by Kane, in order to improve the welding surface of the pipe joint, thereby creating a better weld joint between the connected pipes.

In regard to claim 2, wherein the chamfered end surface terminates in an annular lip (end surface of 14) at the cylindrical inner surface of the annular wall.

3. Claims 5-10 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boice.

In regard to claims 5 and 14, Boice discloses an assembly ready to be welded to form a socket-welded metal joint with reduced residual stresses resulting from the welding, which assembly comprises a hollow metal ring which includes

(1) an internal annular shoulder 18 having an inner diameter; and

(2) an annular wall which

(a) extends from the shoulder,

(b) has a cylindrical inner surface,

(c) has a cylindrical outer surface whose diameter is greater than the inner diameter of the shoulder,

(d) defines with the shoulder a cylindrical socket having a common longitudinal axis, and

(e) has an end surface 12 connecting the cylindrical outer and inner surfaces,

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which end surface is chamfered so that the inner surface extends beyond the outer surface in the axial direction and has a profile such that, as viewed in a cross section taken along the longitudinal axis, there is an angle between the major portion of the end surface and said longitudinal axis; and

B. a metal pipe 10 which includes a cylindrical outer surface and a cylindrical inner surface, with one end of the pipe being disposed in the socket so that the outer surface of the pipe is within the inner surface of the annular wall of the socket; whereby the assembly is ready to be welded by an annular weld which adheres the chamfered end surface of the fitting to the cylindrical outer surface of the pipe. However, Boice does not disclose the exact angle of the end surface. However, it would have been obvious to a person having ordinary skill in the art to make the surface protrude at an angle of 100 to 120 degrees relative to the longitudinal axis because a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

In regard to claims 6 and 15, wherein the outer surface of the pipe is cylindrical over its entire length.

In regard to claims 7 and 16, wherein the chamfered end surface as viewed in said cross section, includes a straight line 12.

In regard to claims 8 and 17, wherein the chamfered end surface, as viewed in said cross section, is a straight line 12.

In regard to claims 9 and 18, Boice does not disclose that the end surface is concave, however, it would have been obvious to a person having ordinary skill in the art to make the

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surface concave because a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

In regard to claim 10, wherein the chamfered end surface terminates in an annular lip 13 at the cylindrical inner surface of the annular wall.

4. Claims 5-8 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown.

In regard to claims 5 and 14, Boice discloses an assembly ready to be welded to form a socket-welded metal joint with reduced residual stresses resulting from the welding, which assembly comprises a hollow metal ring which includes

(1) an internal annular shoulder 13 having an inner diameter; and

(2) an annular wall which

(a) extends from the shoulder,

(b) has a cylindrical inner surface,

(c) has a cylindrical outer surface whose diameter is greater than the inner diameter of the shoulder,

(d) defines with the shoulder a cylindrical socket having a common longitudinal axis, and

(e) has an end surface 14 connecting the cylindrical outer and inner surfaces, which end surface is chamfered so that the inner surface extends beyond the outer surface in the axial direction and has a profile such that, as viewed in a cross section taken along the longitudinal axis, there is an angle between the major portion of the end surface and said longitudinal axis; and

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B. a metal pipe 5 which includes a cylindrical outer surface and a cylindrical inner surface, with one end of the pipe being disposed in the socket so that the outer surface of the pipe is within the inner surface of the annular wall of the socket; whereby the assembly is ready to be welded by an annular weld which adheres the chamfered end surface of the fitting to the cylindrical outer surface of the pipe. However, Brown does not disclose the exact angle of the end surface. However, it would have been obvious to a person having ordinary skill in the art to make the surface protrude at an angle of 100 to 120 degrees relative to the longitudinal axis because a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

In regard to claims 6 and 15, wherein the outer surface of the pipe is cylindrical over its entire length.

In regard to claims 7 and 16, wherein the chamfered end surface as viewed in said cross section, includes a straight line.

In regard to claims 8 and 17, wherein the chamfered end surface, as viewed in said cross section, is a straight line.

5. Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Kane.

In regard to claims 9 and 18, Brown discloses making the end surface chamfered in order to provide a pipe joint with adequate structural strength, but Brown does not disclose that the end surface is concave. Kane discloses providing a concave surface 28 in order to form a weld pocket that will receive enough weld material to improve the strength of the welded joint.

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Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the end surface of Brown, to include a concave surface, as taught by Kane, in order to improve the welding surface of the pipe joint, thereby creating a better weld joint between the connected pipes.

***Allowable Subject Matter***

6. Claims 3-4 and 11-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

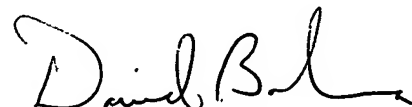
***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kaunitz, Shaffer, and Blevins all disclose similar couplings common in the art.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Bochna whose telephone number is (703) 306-9040. The examiner can normally be reached on 8-5:30 Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (703) 308-2686. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.



**David Bochna**  
**Primary Examiner**  
**Art Unit 3679**